

Amendments to the Drawings

The sheet of drawings attached in the Appendix includes changes to Fig. 1. This sheet replaces the original sheet. The drawings have been changed as follows: the Figure has been amended to identify the third panel in the figure as "C".

Attachment: Replacement Sheet(s)

REMARKS

Applicants have received and reviewed the Office Action dated April 13, 2010. By way of response, Applicants have cancelled claims 7, 8, 12, 20, 25, and 28 without prejudice. Claims 1-4, 9-11, 13, 15, 18, 21-22 and 26-27 have been amended and new claims 29-31 have been added. No new matter has been added. Claims 1-4, 9-11, 13-16, 18, 21-22, 24, 26-27 and 29-31 are pending. Applicants submit that the amended and newly presented claims are supported by the specification as filed.

For the reasons presented below, Applicants respectfully submit that the amended and newly presented claims are in condition for allowance, and notification to that effect is earnestly solicited.

Allowable Subject Matter

Applicant's acknowledge and appreciate the Examiner's recognition that claims 1 and 3 are free of the prior art. Applicant's acknowledge and appreciate the Examiner's recognition that the prior art does not teach or suggest: 1) a mutant strain of mycobacterium or a vector comprising a modified mptpA gene having SEQ ID NO:15 or 2) primers consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, and/or SEQ ID NO:4.

Applicants respectfully submit that the amended and newly presented claims are in condition for allowance.

Election/Restriction

Applicants acknowledge that the restriction requirement has been made final.

Claim Interpretation

The Office Action asserts that the term "bearing" is not described in the specification. The claims no longer recite the term "bearing". The amended claims employ the term "comprising" instead.

The preambles of claims 2 and 4 have been amended, which Applicants believe addresses the topics raised in this section of the Office Action.

The scope of the claims is not altered by these amendments.

Claim Objections

The Office Action objects to claims 1-3, 7-8, 13-16, 18, 20-22, and 24-26 as including non-elected subject matter. Claims 7, 8, 20, and 25 have been canceled, which renders this objection moot for these claims. Although this objection has not been applied to the newly presented claims, it is discussed insofar as it might apply.

Applicants respectfully submit that the amended and newly presented claims include only the elected subject matter.

The Office Action objects to a typographical error in the recitation of "pAK A" in claims 4 and 22. Applicants acknowledge and appreciate the Examiner's suggestion to correct this typographical error. Amended claims 4 and 22 recite "pAKΔA" as suggested by the Examiner.

The Office Action asserts that claims 9 and 10 would be allowable if rewritten in independent format. Applicants respectfully submit that claim 3 is now in condition for allowance, which renders this objection moot.

The Office Action objects to certain asserted informalities in claims 13 and 18. Applicants respectfully submit that amended claims 13 and 18 do not include the informalities noted in the Office Action. Applicants acknowledge and appreciate the Examiner's close reading of the claims for informalities.

Accordingly, Applicants respectfully request withdrawal of the objections.

Rejection of Claims Under 35 U.S.C. § 112, First Paragraph

The Examiner rejected claims 3-4, 13 and 22 under 35 U.S.C. 112, first paragraph, in an enablement rejection. Although this rejection has not been applied to the newly presented claims, it is discussed insofar as it might apply. Applicants respectfully traverse this rejection.

The Office Action asserts that deposit of the vector pAKΔA would enable these claims. Applicants respectfully submit that the claims are enabled without deposit of this vector. A detailed description of the steps involved in the production of the recombinant vector pAKΔA is presented in the application as filed at page 12 under the heading "Construction of recombinant vector, pAKΔA". This section explicitly discloses all the details including the site and steps involved in the construction of this vector. In addition, the respective sequences are mentioned

in Table I of the description. With these details, any artisan can construct the claimed pAKΔA without any difficulty.

Accordingly, Applicants respectfully submit that the amended and newly presented claims fully comply with § 112, first paragraph, and withdrawal of this rejection is earnestly solicited.

Rejection of Claims Under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claims 3-4, 7-8, 11, 13-16, 18, 20-22 and 24-27 under 35 U.S.C. 112, second paragraph. The Office Action objects to certain terms and phrases employed in the claims. Claims 7, 8, 20, and 25 have been canceled, which renders this rejection moot for these claims. Although this rejection has not been applied to the newly presented claims, it is discussed insofar as it might apply. Applicants respectfully traverse this rejection.

The Office Action objects to claims 4 and 22 for the recitation of the vector pAKΔA and asserts that deposit of the vector would overcome this rejection. Applicants respectfully submit that the vector is well described even without deposit of this vector. A detailed description of the steps involved in the production of the recombinant vector pAKΔA is presented in the application as filed at page 12 under the heading "Construction of recombinant vector, pAKΔA". This section explicitly discloses all the details including the site and steps involved in the construction of this vector. In addition, the respective sequences are mentioned in Table I of the description. With these details, any artisan can construct the claimed pAKΔA without any difficulty.

The Office Action objects to the term "hygromycin" in claim 26. Amended claim 26 does not include this term.

The Office Action objects to the term "sequence" in claims 11 and 27. Amended claims 11 and 27 do not include this term.

The Office Action objects to the term "strains" in step (i) of claim 13. Step (i) of amended claim 13 recites "strain" rather than "strains". Applicant respectfully submits that step (j) refers to any individual strain selected from those strains that show resistance to antibiotic hygromycin.

The Office Action objects to a phrase employed in step (l) of claim 13. Step (l) of amended claim 13 does not include the phrase objected to in the Office Action.

The Office Action objects to a phrase employed in claim 27. Amended claim 27 does not include the phrase objected to in the Office Action.

Accordingly, Applicants respectfully submit that the amended and newly presented claims fully comply with § 112, second paragraph, and withdrawal of this rejection is earnestly solicited.

Rejection of Claim Under 35 U.S.C. § 101

The Examiner rejected claims 11 and 27 under 35 U.S.C. 101. The Office Action objects to the term “sequence” in claims 11 and 27. Although this rejection has not been applied to the newly presented claims, it is discussed insofar as it might apply. Applicants respectfully traverse this rejection.

Amended claims 11 and 27 do not include the term “sequence”.

Accordingly, Applicants respectfully submit that the amended and newly presented claims fully comply with § 101, and withdrawal of this rejection is earnestly solicited.

Rejection of Claims Under 35 U.S.C. § 102(b)

The Examiner rejected claim 27 under 35 U.S.C. 102(b) as anticipated by Ullrich et al., WO 01/81422. Although this rejection has not been applied to the newly presented claims, it is discussed insofar as it might apply. Applicants respectfully traverse this rejection.

Applicants respectfully submit that the cited reference neither teaches nor suggests a “primer comprising SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, or SEQ ID NO:4”, as recited in claim 27.

Accordingly, based on the foregoing differences, Applicants submit that the cited reference neither teaches nor suggests the presently claimed primers, and withdrawal of this rejection is earnestly solicited.

Drawings

The Office Action asserts that Figure 1 should include a letter to label each of panels A-C. Applicants submit herewith a corrected Figure 1 including a label for panel "C". Applicants respectfully request withdrawal of this objection.

Summary

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.


Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers or any future reply, if appropriate.

Please charge any additional fees or credit any overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

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MTS:kf

